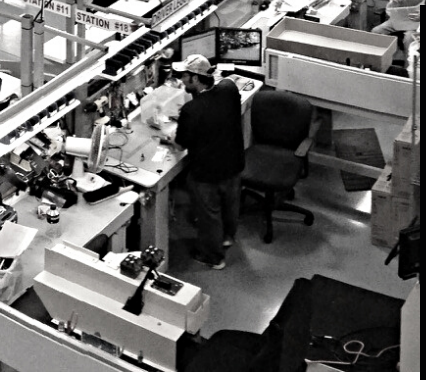
Mission Reconfigurable™

UNIVERSAL TRAINING PLATFORM

THE NEW STANDARD



PRODUCTION FACILITY

Our production facility in Port Orange, Florida, (formerly Raydon Corp), specializes in military simulation training. Since 1988, we have blended commercial technology with the science of human performance to develop training systems for warfighters.

Our products are built from an open standards hardware and software architecture we call Mission Reconfigurable™ **(MR)**. Building on this foundation, we can use the same base technology to animate almost any training system, especially those that feature a significant human-machine interface. All MR products can run together in the same training exercise.

We offer product life cycle management — concept, engineering design, integration, manufacture, deployment, and sustainment.

We also offer engineering and manufacturing support services.

By Light’s simulation training innovation hub is a 112,000 square foot facility built specifically for the design, development, and production of complex virtual reality training systems.

- Instructional System Design -- We create learning experiences that are intuitive to the student and the operator, and we work tirelessly to improve the efficiency of knowledge transfer and retention.
- Simulation Software – Our core software has been designed to interoperate and integrate with multi-domain training systems, and our modular design approach allows us to incorporate third-party software whenever it improves our training solution.
- Hardware Engineering – Our reconfigurable training system architecture can adapt to any physical configuration or user fidelity without requiring the core software to be reprogrammed.
- Manufacturing and Assembly -- Our 50,000 square foot manufacturing space and IPC-trained electrical-mechanical assemblers are uniquely qualified to fill the widening gap between large-scale assembly line capabilities and low-rate production of complex equipment.
- Warehousing and Security – Our facility is access-controlled and camera-patrolled, including fenced parking for more than 30 trailers, 12 dock doors, a 24/7 spares depot, and plenty of pallet rack storage capacity.

MISSION RECONFIGURABLE

UNIVERSAL TRAINING PLATFORM

THE NEW STANDARD

Mission Reconfigurable™ is more than a product; it's a true open standards platform for military simulation training.

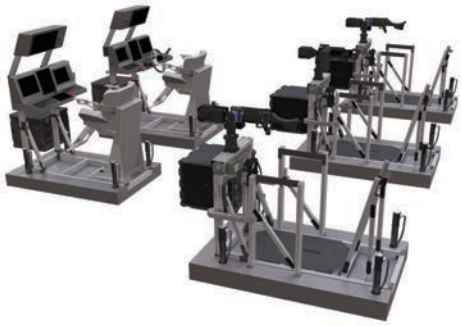
With an open standards design, MR hardware components are easy to replace or upgrade. A high-fidelity user-interface panel can be designed exactly like the real vehicle or simplified with touchscreen panels instead of switches and knobs – whatever the mission requires.

The MR platform is completely independent from the software – meaning the same MR hardware can be operated using any company's software.

MISSION RECONFIGURABLE CAN TRAIN ANYTHING - MAKING IT THE NEW STANDARD.

FIXED WING CREW TRAINING

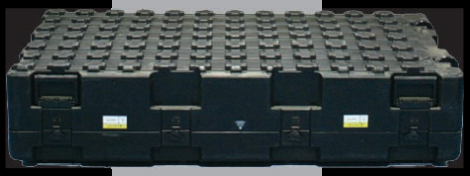
OPTIONAL MOTION BASE



MARITIME WITH MOTION

RECRUITING EXPERIENCES

MISSION RECONFIGURABLE



BENEFITS

TIME

- Travel reduced with point of need capability
- Simple setup/tear-down, no tools/training needed
- Predictable throughput and time to proficiency

COST

- Common parts mean efficient manufacturing, maintenance & support
- Modular design facilitates easier upgrades
- Lower lifecycle cost

CHOICE

- Any physical configuration
- Mix and match fidelity options
- Any company's software
- Any company's hardware

Point of Need Training

- Drill in psychomotor skills (hand-eye coordination)
- Develop and sustain cognitive skills (detection, recognition, identification, decision making, situational awareness, and communication)

Portable

- Rugged two-man lift travel cases, pallet friendly
- Fits through any doorway
- Portable computer and electronics rack
- Wheeled cases for easy transport

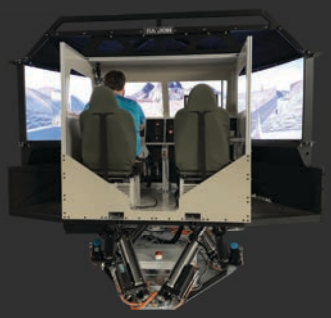
Fast and Easy Setup

- No tools required
- 11 minutes to set up crew trainer!
- Only one computer rack cable to connect each seat
- Single standard electrical connections (15A/120V or 20A/120V)

Reconfigurable

- Built with interchangeable dashboards, panels, consoles, weapons, and tactical peripherals
- Choice of appropriate fidelity level
- Fidelity options from detailed fully tactile panels with precise controls to lower-cost glass panels
- All Mission Reconfigurable trainers can be networked together to support collective training
- The flexible design can be adapted for trailers or fixed in place for institutional training
- Optional Instructor / Operator Station

MR PLATFORM OPTIONS



Handheld Tabletop Portable Trailer Institutional	Scalable Individual Training Crew Training Section → Platoon → Company Network Capable	**Enduring Investment** As modernization continues to impact vehicles, weapons, and communication, MR hardware components can be replaced or upgraded without a total system overhaul.

INDIVIDUAL TRAINER

MOBILE SUITE TRAINER

RECONFIGURABLE INSTITUTIONAL TRAINER

MR is reconfigurable to any platform configuration. It is famous as the basis for the U.S. Army's RVCT, but MR is more than just that. Configured as a desktop trainer or installed in a trailer or hardened and set in place for permanent use in a facility, every platform configuration can work with other MR products. And all can run on the same software version.

DANGER
FRAGILE

PORTABLE PLATFORMS

GROUND VEHICLES

ABRAMS

Driver, Commander, Gunner, and Loader
120 mm, 7.62 Coax, Loader's MG, CWS

BRADLEY

Driver, Commander, Gunner, and Gunner
25mm Main Gun, 7.62 Coax, TOW Missile

STRYKER

All critical Stryker platforms to support the training needs of a Stryker BCT

COMBAT WHEELED

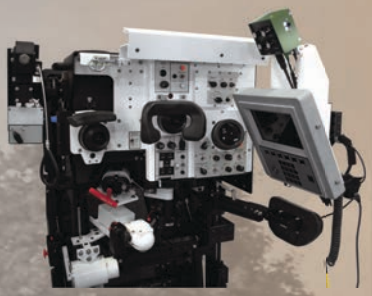
JLTV, HMMWV, M-ATV, and FMTV with weapons systems

LOGISTICS SUPPORT

HEMTT, HET, and M88, plus HMMWVs and JLTVs without weapons systems

ABRAMS

Driver, Commander, Gunner, and Loader
120 mm, 7.62 Coax, Loader's MG, CWS



GUNNER UPPER SECTION

COMMANDER MIDDLE SECTION

LOADER, DRIVER, COMMANDER, AND GUNNER STATIONS

DRIVER MIDDLE, AND LOWER SECTION

BRADLEY

Driver, Commander, Gunner, and Gunner
25mm Main Gun, 7.62 Coax, TOW Missile

DRIVER MIDDLE SECTION

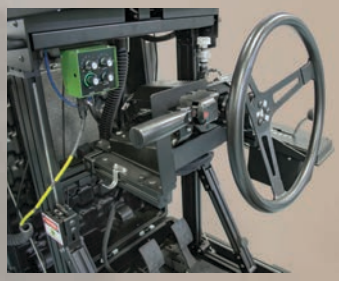
GUNNER UPPER SECTION

DRIVER, COMMANDER, AND GUNNER STATIONS

COMMANDER MIDDLE SECTION

STRYKER

All critical Stryker platforms to support the training needs of a Stryker BCT



DRIVER MIDDLE SECTION

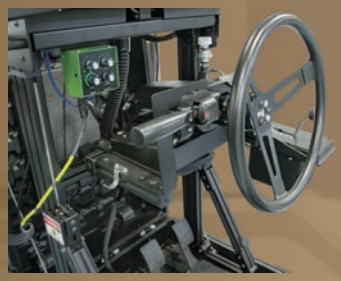
RWS GUNNER

DRIVER, COMMANDER, AND RWS GUNNER STATIONS

COMMANDER MIDDLE AND UPPER SECTIONS

COMBAT WHEELED

JLTV, HMMWV, M-ATV, and FMTV with weapons systems

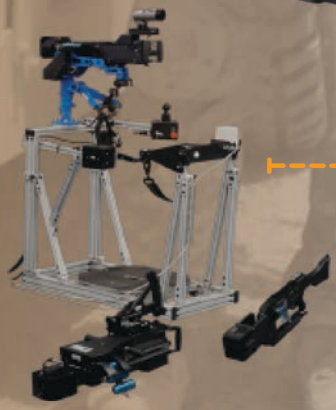


DRIVER MIDDLE SECTION

RWS GUNNER

DRIVER, COMMANDER, AND MMG GUNNER STATIONS

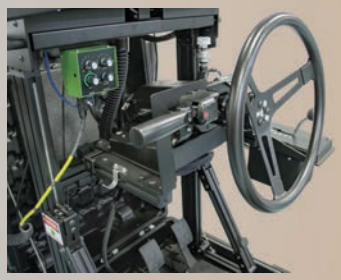
COMMANDER MIDDLE AND UPPER SECTIONS



MMG GUNNER

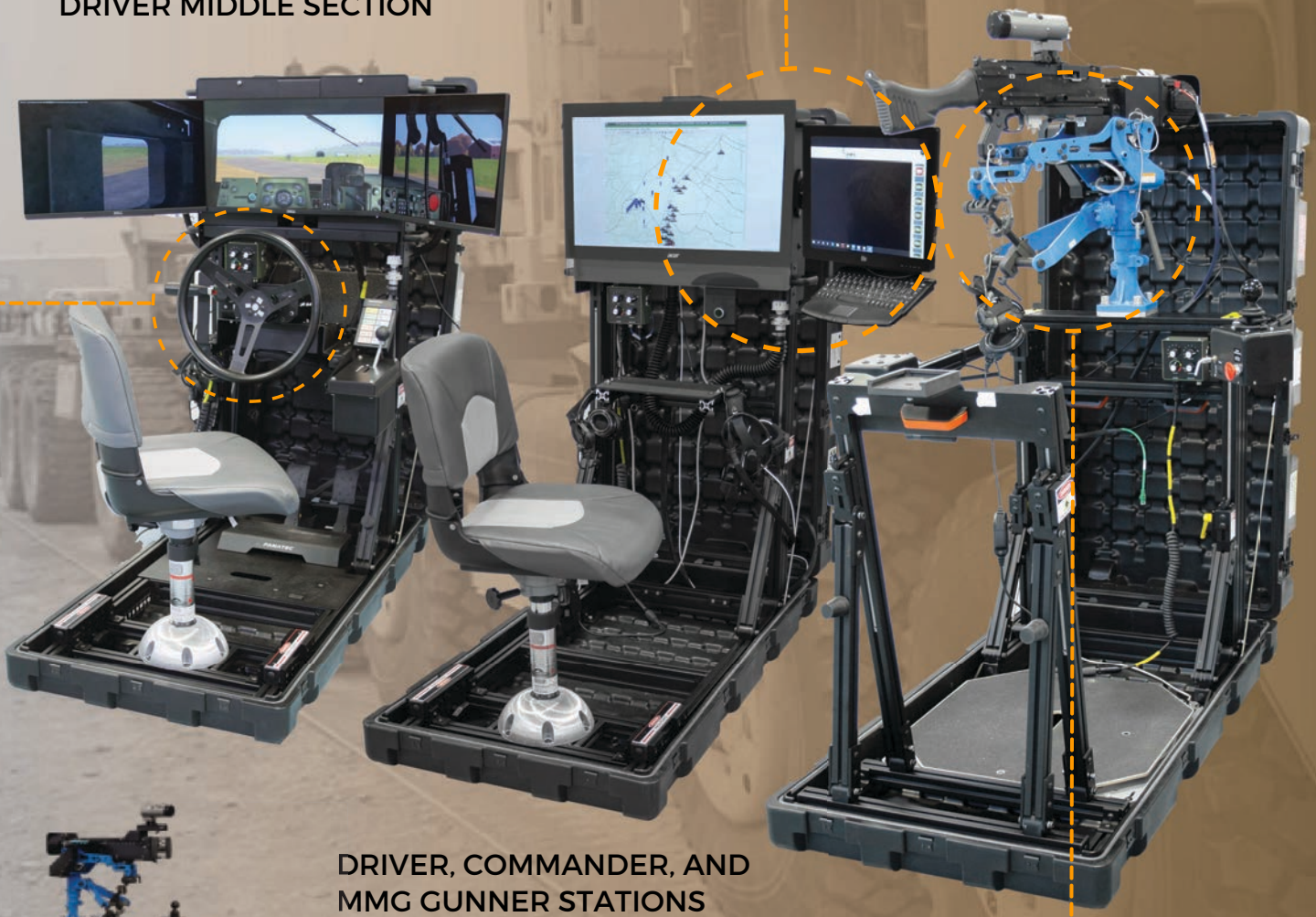
LOGISTICS SUPPORT

HEMTT, HET, and M88, plus HMMWVs and JLTVs without weapons systems



DRIVER MIDDLE SECTION

COMMANDER MIDDLE AND UPPER SECTIONS



DRIVER, COMMANDER, AND MMG GUNNER STATIONS

MMG GUNNER

We blend commercial technology with the science of human performance to develop training systems for warfighters.

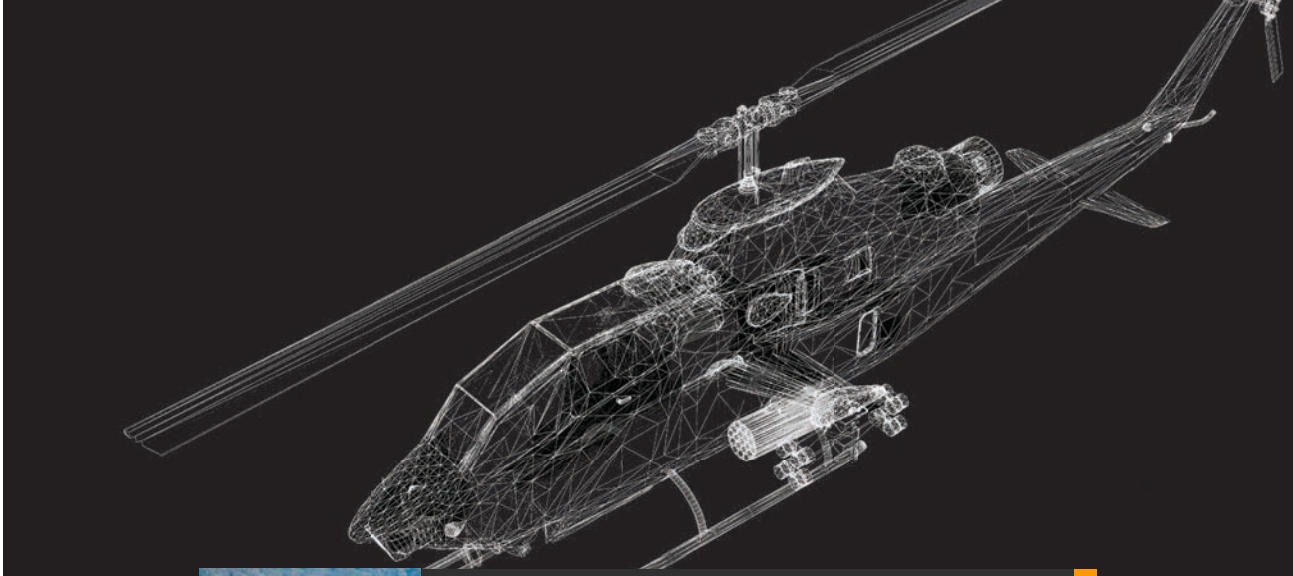
Our open standards hardware and software architecture, Mission Reconfigurable (MR), is the technology foundation that can animate almost any training system, particularly those featuring a significant human-machine interface.

The MR simulation platform is designed to adapt to any military training requirement. It can flex in fidelity from handheld to portable to trailerized to institutional. MR supports training from individual to mission rehearsal and can easily be configured to train crews operating ground vehicles, aircraft, naval vessels, or construction equipment. ***All MR products can run together in the same training exercise.***

We provide product life cycle management: concept, engineering design, integration, manufacture, deployment, and sustainment.

PORTABLE PLATFORMS

AIRCRAFT



APACHE

Pilot and Co-Pilot positions

BLACKHAWK

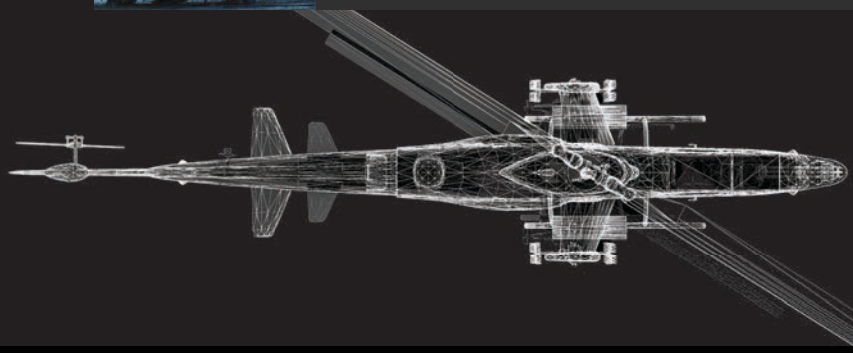
Pilot and Co-Pilot, and Non-Rated Crew positions

CHINOOK

Pilot, Co-Pilot, Non-Rated Crew, and Ramp Gunner positions

UAS

Pilot/Platform Operator and Payload Operator positions



APACHE

Pilot and Co-Pilot positions

PILOT STATION, UPPER SECTION

GUNNER STATION, UPPER SECTION

PILOT AND CO-PILOT GUNNER STATIONS

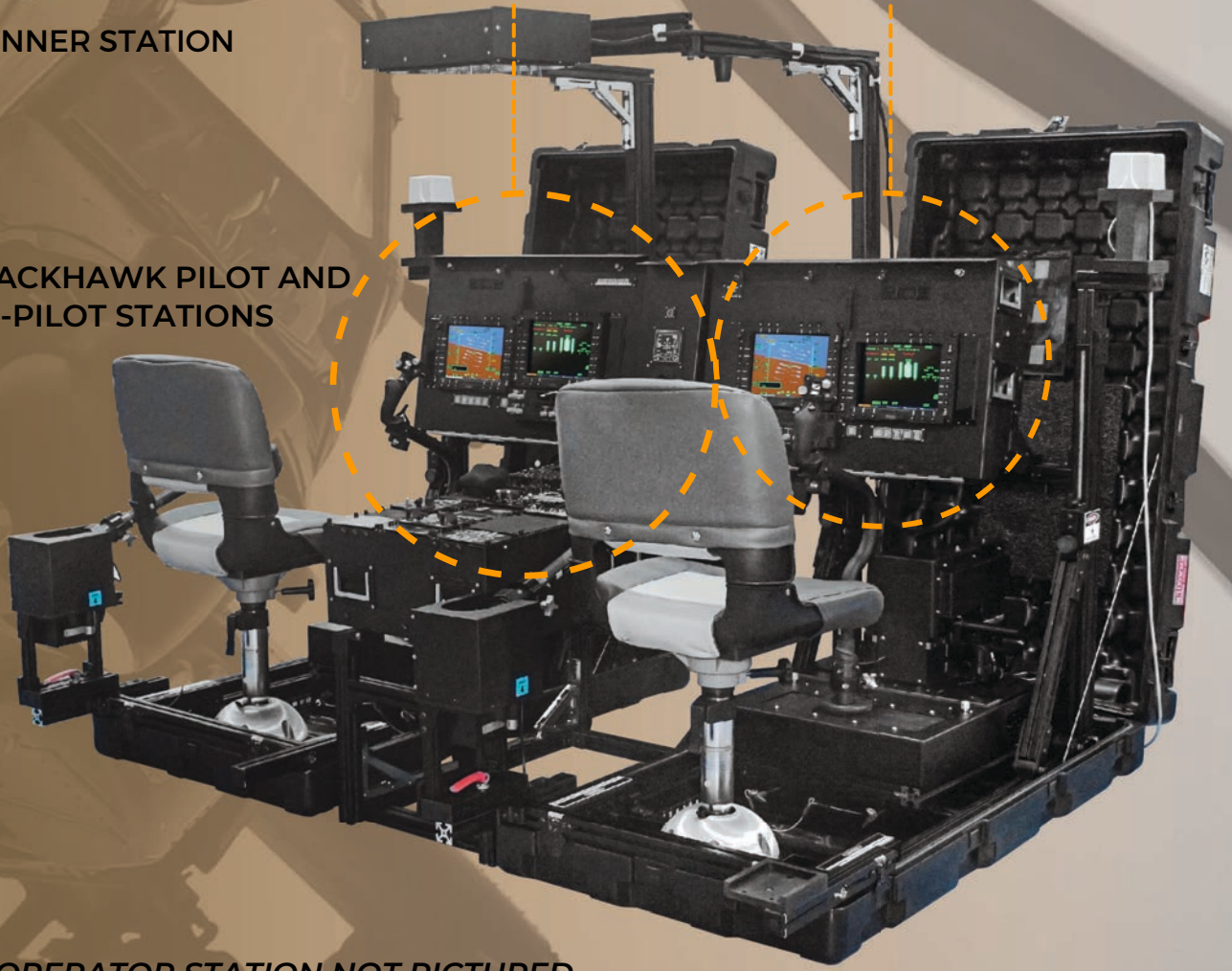
BLACKHAWK

Pilot and Co-Pilot, and Non-Rated Crew positions

DOOR GUNNER STATION

BLACKHAWK PILOT AND CO-PILOT STATIONS

BLACKHAWK PILOT AND CO-PILOT STATIONS



**** HOIST OPERATOR STATION NOT PICTURED***

CHINOOK

Pilot, Co-Pilot, Non-Rated Crew, and Ramp Gunner positions

DOOR GUNNER STATION

CHINOOK OVERHEAD CONSOLE

COCKPIT CENTER CONSOLE

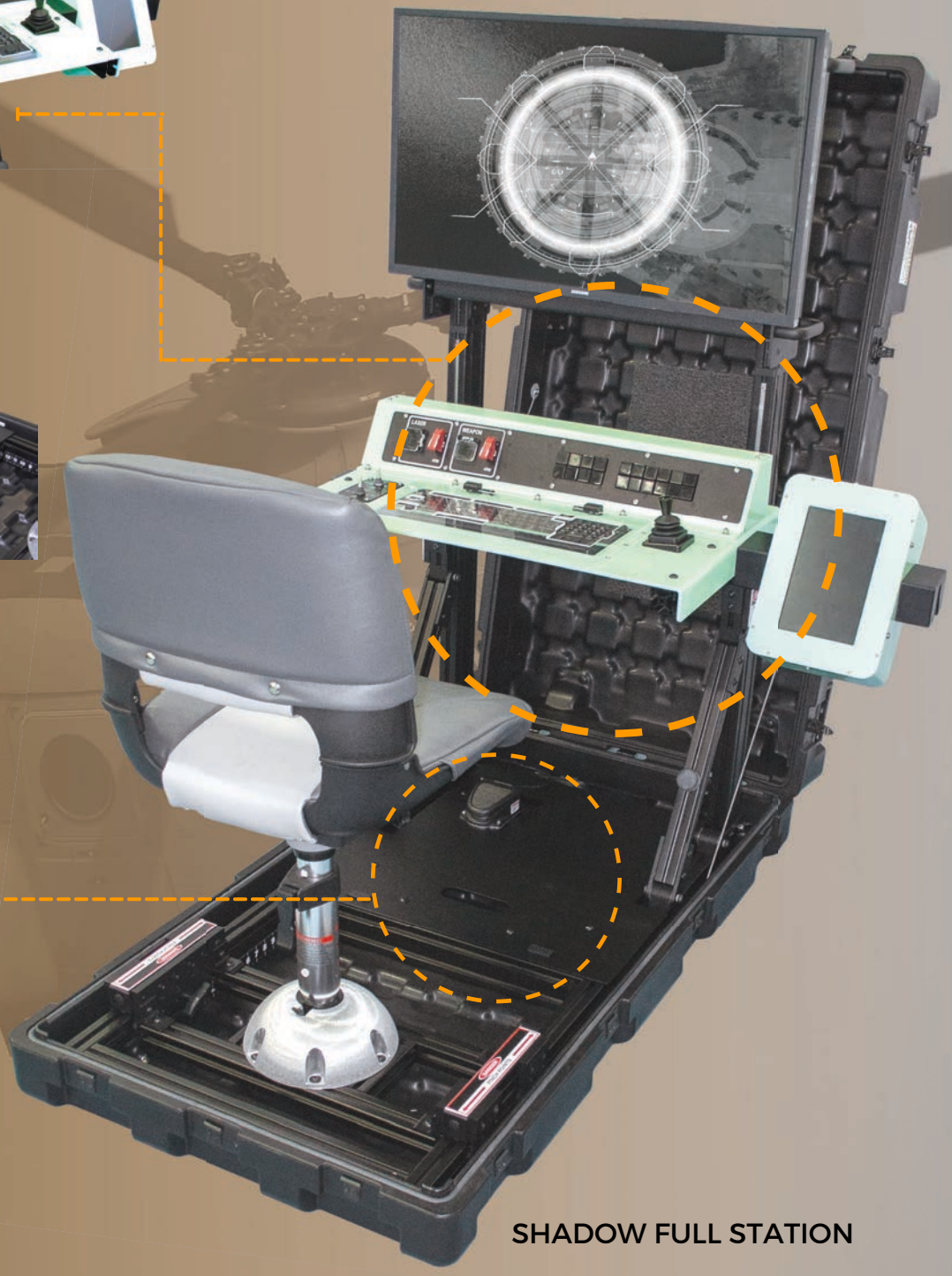
CHINOOK PILOT AND CO-PILOT STATIONS

UAS

Pilot/Platform Operator and Payload Operator positions

SHADOW MIDDLE SECTION

SHADOW BOTTOM SECTION



SHADOW FULL STATION

Mission Reconfigurable™

BYLIGHT
LIGHTING THE PATH - TO INNOVATION

By Light Professional IT Services LLC
1420 Hockney Ct., Port Orange, FL 32128
+1 (386) 267-2936 | info@bylight.com

SCAN ME

© 2022, By Light Professional IT Services LLC. All Rights Reserved.

CLT-138-02 | March 23, 2022